

IN THE CLAIMS

Please amend claims 1, 4, and 7 as follows:

1. (CURRENTLY AMENDED) An automatic aggregation method for automatically aggregating a plurality of records using a computer, the plurality of records each including a plurality of items including a key parameter and a numerical value which is at least related to the key parameter, the method comprising the steps of:

- (a) inputting one of the plurality of records to the computer;
- (b) adding at least one node, representing contents of the input record, to a position, corresponding to the key parameter included in the input record, of a hierarchical tree;
- (c) updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node, in accordance with the numerical value included in the input record; and
- (d) repeating steps (a) through (c) until all the plurality of records are processed, thereby outputting an aggregation result for each of items of the key parameter,

wherein step (b) comprises a step of determining whether a node corresponding to the key parameter already exists in the hierarchical tree, wherein:

(b1) if it is determined that the node corresponding to the key parameter already exists, then a new node corresponding to the key parameter is not added, and at least one node corresponding to a parameter which is not the key parameter is added to the hierarchical tree; and

(b2) if it is determined that the node corresponding to the key parameter does not exist, then a new node corresponding to the key parameter and at least one node corresponding to a parameter which is not the key parameter are added to the hierarchical tree.

2. (ORIGINAL) An automatic aggregation method according to claim 1, wherein the hierarchical tree is represented by a table including a pointer pointing to one node on a level lower by one than that of each node included in the hierarchical tree, a pointer pointing to one node on the same level as that of each node included in the hierarchical tree, and a pointer

pointing to one node on a level higher by one than that of each node included in the hierarchical tree.

3. (ORIGINAL) An automatic aggregation method according to claim 1, further including the step of converting the aggregation result for each of the items of the key parameter into the Extensible Markup Language.

4. (CURRENTLY AMENDED) An automatic aggregation apparatus for automatically aggregating a plurality of records using a computer, the plurality of records each including a plurality of items including a key parameter and a numerical value which is at least related to the key parameter, the apparatus comprising:

a control section for executing automatic aggregation processing, which includes the steps of:

- (a) inputting one of the plurality of records to the computer;
- (b) adding at least one node, representing contents of the input record, to a position, corresponding to the key parameter included in the input record, of a hierarchical tree;
- (c) updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node, in accordance with the numerical value included in the input record; and
- (d) repeating steps (a) through (c) until all the plurality of records are processed, thereby outputting an aggregation result for each of items of the key parameter,

wherein step (b) comprises a step of determining whether a node corresponding to the key parameter already exists in the hierarchical tree, wherein:

(b1) if it is determined that the node corresponding to the key parameter already exists, then a new node corresponding to the key parameter is not added, and at least one node corresponding to a parameter which is not the key parameter is added to the hierarchical tree; and

(b2) if it is determined that the node corresponding to the key parameter does not exist, then a new node corresponding to the key parameter and at least one node corresponding to a parameter which is not the key parameter are added to the hierarchical tree.

5. (ORIGINAL) An automatic aggregation apparatus according to claim 4, wherein the hierarchical tree is represented by a table including a pointer pointing to one node on a level lower by one than that of each node included in the hierarchical tree, a pointer pointing to one node on the same level as that of each node included in the hierarchical tree, and a pointer pointing to one node on a level higher by one than that of each node included in the hierarchical tree.

6. (ORIGINAL) An automatic aggregation apparatus according to claim 4, further including the step of converting the aggregation result for each of the items of the key parameter into the Extensible Markup Language.

7. (CURRENTLY AMENDED) A computer readable recording medium having a program, stored thereon, for causing a computer to execute automatic aggregation processing for automatically aggregating a plurality of records, the plurality of records each including a plurality of items including a key parameter and a numerical value which is at least related to the key parameter, the automatic aggregation processing, which includes the steps of:

- (a) inputting one of the plurality of records to the computer;
- (b) adding at least one node, representing contents of the input record, to a position, corresponding to the key parameter included in the input record, of a hierarchical tree;
- (c) updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node, in accordance with the numerical value included in the input record; and
- (d) repeating steps (a) through (c) until all the plurality of records are processed, thereby outputting an aggregation result for each of items of the key parameter,

wherein step (b) comprises a step of determining whether a node corresponding to the key parameter already exists in the hierarchical tree, wherein:

(b1) if it is determined that the node corresponding to the key parameter already exists, then a new node corresponding to the key parameter is not added, and at least one node corresponding to a parameter which is not the key parameter is added to the hierarchical tree; and

(b2) if it is determined that the node corresponding to the key parameter does not exist, then a new node corresponding to the key parameter and at least one node corresponding to a parameter which is not the key parameter are added to the hierarchical tree.